

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. (currently amended) A ~~hydrophilic, water-wettable,~~ semipermeable hollow-fibre membrane, ~~based on a synthetic first polymer,~~ particularly for use in hemodialysis, hemodiafiltration and hemofiltration, the comprising

a hydrophilic, water-wettable membrane being based on

a hydrophobic first polymer being selected from the group consisting of an aromatic sulfone polymer, a polycarbonate, polyimide, polyetherimide, polyetherketone, polyphenylene sulfide, or a copolymer or a modification of these polymers, or a mixture of these polymers and

a hydrophilic second polymer being selected from the group consisting of polyvinylpyrrolidone, polyethylene glycol, polyvinyl alcohol, polyglycol monoester, polysorbate, carboxymethylcellulose, or a modification or copolymer of these polymers,

possessing an open-pored, integrally asymmetric structure across its wall, with a porous separating layer of thickness 0.1 to 2 μm on its inner surface facing the lumen, and an open-pored supporting layer adjoining the separating layer, and

having an ultrafiltration rate in albumin solution in the range of 25 to 60 ml/(h·m²·mmHg), ~~characterized in that,~~

wherein after prior drying, the hollow-fibre membrane has a minimum sieving coefficient for cytochrome c of 0.8 combined with a maximum sieving coefficient for albumin of 0.005, and

whereby the hollow-fibre membrane in the dry state is free from pore-stabilising additives in the membrane wall.

2-3. (cancelled)

4. (currently amended) Hollow-fibre membrane according to Claim 3 1, characterised in that the ~~hydrophobic first polymer~~ is an aromatic sulfone polymer such as being selected from the group consisting of polysulfone, polyethersulfone, polyphenylenesulfone or polyarylethersulfone, a polycarbonate, polyimide, polyetherimide, polyetherketone, polyphenylene sulfide, or a copolymer or a modification of these polymers, or a mixture of these polymers.

5. (currently amended) Hollow-fibre membrane according to Claim 4 1, characterised in that the hydrophilic first polymer is a polysulfone or a polyethersulfone.

6. (cancelled)

7. (previously presented) Hollow-fibre membrane according to Claim 1, characterised in that the supporting layer extends from the separating layer across essentially the entire wall of the hollow-fibre membrane, has a sponge-like structure and is free from finger pores.

8. (previously presented) Hollow-fibre membrane according to Claim 1, characterised in that it has a minimum sieving coefficient for cytochrome c of 0.85.

9. (previously presented) Hollow-fibre membrane according to Claim 1, characterised in that it has a maximum sieving coefficient for albumin of 0.003.

10. (withdrawn) Method for producing a hydrophilic, water-wettable, semipermeable hollow-fibre membrane according to Claim 1, the method comprising the following steps:

- a. preparing a homogeneous spinning solution comprising 12 to 30 wt.%, relative to the weight of the spinning solution, of a synthetic first polymer and, if applicable, other additives in a solvent system,
- b. extruding the spinning solution through the annular slit of a hollow-fibre die to give a hollow fibre,

- c. extruding an interior filler through the central opening of the hollow-fibre die, the interior filler being a coagulation medium for the synthetic first polymer and comprising a solvent and a non-solvent for the synthetic first polymer,
- d. bringing the interior filler into contact with the inner surface of the hollow fibre to initiate coagulation in the interior of the hollow fibre and for formation of a separating layer on the inner surface of the hollow fibre and formation of the membrane structure,
- e. passing the hollow fibre through a coagulation bath to complete the formation of the membrane structure if necessary, and to fix the membrane structure,
- f. extracting the hollow-fibre membrane thus formed to remove the solvent system and soluble substances,
- g. drying the hollow-fibre membrane,

characterised in that the interior filler contains a polyelectrolyte with negative fixed charges, as a result of which a hollow-fibre membrane is obtained with a minimum sieving coefficient for cytochrome c of 0.80 combined with a maximum sieving coefficient for albumin of 0.005.

11. (withdrawn) Method according to Claim 10, characterised in that the spinning solution contains 12 to 30 wt.%, relative to the weight of the spinning solution, of a synthetic first polymer in combination with 0.1 to 30 wt.%, relative to the weight of the spinning solution, of a hydrophilic second polymer.

12. (withdrawn) Method according to Claim 11, characterised in that an aromatic sulfone polymer such as polysulfone, polyethersulfone, polyphenylenesulfone or polyarylethersulfone, a polycarbonate, polyimide, polyetherimide, polyetherketone, polyphenylene sulfide, or a copolymer or mixture of these polymers is used as the synthetic first polymer.

13. (withdrawn) Method according to Claim 11, characterised in that polyvinyl-pyrrolidone, polyethylene glycol, polyvinyl alcohol, polyglycol monoester, polysorbate, carboxymethylcellulose, or a copolymer of these polymers is used as the hydrophilic second polymer.

14. (withdrawn) Method according to Claim 10, characterised in that the solvent system comprises a polar aprotic solvent.

15. (withdrawn) Method according to Claim 10, characterised in that the polyelectrolyte is selected from the group of polyphosphoric acids, polysulfonic acids or polycarboxylic acids.

16. (withdrawn) Method according to Claim 15, characterised in that the polycarboxylic acids are homo- or copolymers of acrylic acid.

17. (withdrawn) Method according to Claim 10, characterised in that the proportion by weight of the polyelectrolyte relative to the weight of interior filler is 0.01 to 1 wt. %

18. (previously presented) Hollow-fibre membrane according Claim 1, characterised in that a polyelectrolyte with negative fixed charges is physically bound in the separating layer.

19. (previously presented) Hollow-fibre membrane according to Claim 1, with an ultrafiltration rate in albumin solution in the range of 30 to 55 ml/(h·m²·mmHg).